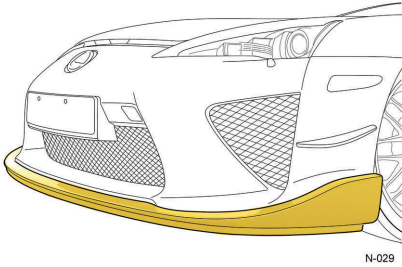
Aerodynamics

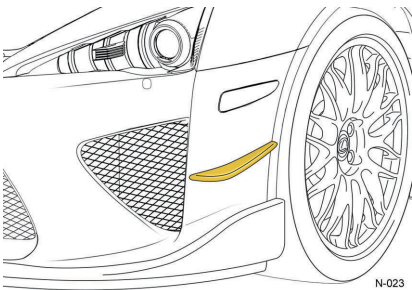
The Nürburgring Package has improved the aerodynamic performance of the vehicle's whole body, so that a high level of handling stability can be acquired during high-speed driving.

A prepreg hollow CFRP (Carbon Fiber Reinforced Plastics) large-sized front spoiler, canards and a fixed type large-sized rear wing have been adopted as exclusive exterior equipment. These items increase downforce as well as precisely control airflow, further improving the LFA's high driving stability.

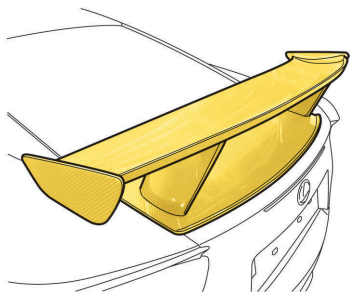
N-037

Large-sized front spoiler

A hollow structure has been adopted, achieving weight reduction. Additionally, a one-piece front spoiler that extends from the front to the sides has been achieved, ensuring rigidity.

The air that flows along the underbody is precisely controlled, simultaneously increasing downforce.

Canard

Attached to each side of the front bumper, the front canards have been constructed to be as thin as possible.

By increasing downforce, straightline stability and grip when cornering are enhanced, contributing to an improvement in handling stability.

Fixed type large-sized rear wing

By enlarging the wing in a transverse direction and by making the wing and its deflector form a gurney lip, down-force is efficiently generated.

Furthermore, end plates are integrated into both ends of the wing, reducing induced drag and optimizing the wing's efficiency.

Aluminum support frame

An aluminum support frame has been mounted in the area where the active rear wing is stored in the standard package, increasing the support's rigidity.

This helped to ensure that the fixed type large-sized rear wing that can withstand a load of 3500 N while also achieving a significant weight reduction.

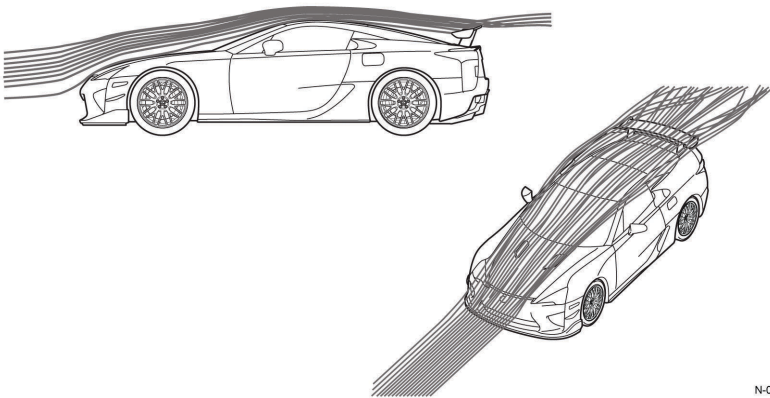
Cd and Cl

"Cd" is an abbreviation that means "Coefficient of drag". When referring to a car, "air resistance" is proportional to this value multiplied by the frontal area (the surface area that is seen when looking at the vehicle from directly in front). In other words, the lower, more compact the vehicle, the lower the air resistance.

On the other hand, "Cl" is an abbreviation that means "Coefficient of lift". If this value is less than zero, downforce (the force that pushes the vehicle onto the road) is being acquired.

Drag (D) and lift (L) can be calculated using the following formula:
(ρ : Air density V : Velocity (vehicle speed) A : Frontal area)

$$D \text{ (or } L) = \frac{1}{2} \times \rho \times V^2 \times Cd \text{ (or } Cl) \times A$$

With the Nürburgring Package, the Cl value has been enhanced and downforce has been increased by adopting aero-parts, helping to pursue a feeling of reassuring handling stability, even when driving at high speeds.

Due to the Nürburgring Package making changes based on circuit driving, minimum ground clearance is lowered. When passing over an uneven surface, drive extremely carefully to ensure the body does not interfere with the road surface.